Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

Draft Construction Permit No. VS-02-002
AMERICAN FUJI SEAL, INC.
1051 BLOOMFIELD ROAD, BARDSTOWN, KY
February 11, 2004
KEITH METZKER, REVIEWER
AFS Plant I.D. # 21-179-00031
Application Log # 54483

SOURCE DESCRIPTION:

American Fuji Seal is a Title V source that has not been issued a Title V permit. The source manufactures plastic products. The source's main operations are printing and extruding.

Permit VS-02-002 will be for construction/operation of a tintering line. The project is borderline off-permit or 502(b)(10). However, since operation and maintenance of control equipment is required and no post-1994 permits for extrusion and supporting equipment have been issued to the source, this reviewer decided that a VS permit would be appropriate.

COMMENTS:

Type of control and efficiency

Raw material transferring equipment associated with the tintering line uses cyclones and filters. This reviewer has assumed that the combination is 99% efficient at controlling material that isn't so large that the material will undoubtedly fall directly out of the air if it were to escape the transferring equipment. The source's application lists 99.99% efficiency but the efficiency has not been utilized since test results or a manufacturer's guarantee were not provided. System boundaries and gravity will control 100% of the larger particles.

No control equipment is needed or used on the remainder of the tintering line equipment.

Emission factors and their source

Emissions from the raw material transferring equipment will be particulate in nature. The source's application describes 0.5% of the raw material as a possible emission due to size. The source's estimate seems reasonable and has been used.

Particulate emissions for machinery past the vacuum system of the tintering line have been determined to be negligible based on the nature of the processes.

VOC emissions may be generated at the extruders and have been estimated based on draft AP-42 literature. VOC emissions from the extruders have been assumed to be 1.23×10^{-5} lbs/lb of rubber supplied to the extruders based on the compound #6 total Method 25A organics emission factor in the draft AP-42 literature for extrusion. The source's application has an estimate that is about a factor of 100 lower than the AP-42 estimate used. The source's estimate has not been used because it does not seem to

consider materials mixed with the general purpose polystyrene. No other VOC emissions are expected.

COMMENTS (CONTINUED):

Applicable regulations

No regulations apply to the VOC emissions.

Regulation 401 KAR 59:010, New process operations, will apply since the affected facility will commence after July 2, 1975.

Regulation 401 KAR 52:020, Title V permits, requires a permit.

PERIODIC MONITORING:

No monitoring is required for compliance with mass and opacity standards applicable to the tintering line since proper operation and maintenance will assure compliance with the limits. The cyclones and filters are extremely reliable and failures will be obvious to personnel operating the systems. A compliance calculation should be used to demonstrate compliance.

EMISSION AND OPERATING CAPS DESCRIPTION:

See 401 KAR 59:010.

CALCULATIONS:

Maximum PM = 1,000 lbs/hr x 0.005 = 5 lbs/hr uncontrolled x 99% control = 0.05 lbs/hr controlled
= 0.22 tons/yr

Maximum VOC = 1,000 lbs/hr x 1.23 x 10^{-5} = 0.123 lbs/hr = 0.054 tons/yr